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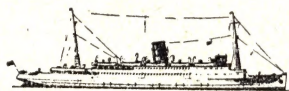
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Model Ships and Power Boats

INCORPORATING *Ships and Ship Models*

EDITED BY EDWARD BOWNESS

VOL IV NO 40

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The Ship's Log

COVER PICTURE

The cover picture this month, which shows the port bow of the model of the *Loyal London*, which has just been completed, will have a strong appeal for a certain section of our readers for two reasons; first, as showing a very fine example of the headwork of the ship at a time when the ornamentation of the ship was at its most profuse and gorgeous, and second as a proof that the skill of the ship modeller of centuries ago is not altogether lost but still exists in certain quarters. And not only is the skill of the modellers to be admired but their determination and perseverance in carrying through such a big project to such a successful conclusion. The article in this issue gives one an idea of the problems encountered in such an undertaking. An interesting fact in connection with this model is that the two men who built it, Robert Spence and Leslie A. Wilcox, are both artists, in fact, the latter is better known as a marine painter than as a ship modeller. The type of skill required for making builders' models of modern ships is largely mechanical, and even in models of sailing ships such as the *Pass of Melfort* in the Science Museum the same holds good. Dr. Longridge's model of H.M.S. *Victory*, also in the Science Museum, has somewhat of this character. This is largely due to the fact that the model-maker of today has machines on which he can make many of his parts. The *Loyal London*, on the other hand, is an artist's model, much of the work was done by hand, and the effect aimed at was to make something to resemble as closely as possible the original model which it replaces. When it is in the Science Museum it will be interesting to compare it with the models above mentioned. Its workmanship will be found to resemble that of

the model of H.M.S. *Prince*, of 1670, rather than that of H.M.S. *Victory*. In Dr. Longridge's model the fitting and the finish is precise and accurate, in some cases even exceeding that on the original ship; in the *Loyal London* the style is freer and the effect aimed is not meticulous accuracy but rather a knowledgeable artist's impression of the original—which is a totally different thing from the artist's impression one often sees in modern painting.

THE CUTTY SARK

At last something seems to be on foot regarding the preservation of the *Cutty Sark*. She has been put in dry dock for survey and we understand that the future of the ship will be decided on the result of the survey. We sincerely trust that the report will be satisfactory and that those interested will be encouraged to go forward with their plans for her preservation and complete restoration. We also trust that if and when this takes place her destination will be the London River which she graced in her hey-day, to serve as a reminder of the days when both tea and wool clippers raced to London to catch the first sales.

OUR CORRESPONDENTS

Some weeks ago we received a letter from a Mr. R. Wigley, of St. Albans, Herts. We addressed our reply in this manner, but as we feared, it was returned to us stamped "Unsufficiently addressed." Another letter came from Mr. G. C. E. White with no address at all. If these two gentlemen will send their full addresses we will gladly reply. We have no wish that our correspondents should feel that we neglect to answer their letters.

*MODEL POWER BOAT TOPICS

By Edgar T. Westbury

WHAT is the most suitable type of model power boat for the novice to build? This question, with minor variations, is frequently encountered either in correspondence or at the pond side, and like many other apparently simple and direct questions, has more than one answer. It is tacitly understood that not only the actual construction, but also the subsequent running of the boat, must be taken into consideration, even if not actually mentioned. What it really amounts to is that the novice wants a boat which is not only within his ability to construct successfully, but will also give the maximum satisfaction when finished. And, undoubtedly, allowance must be made for personal preference and taste in these matters.

Generally speaking, I do not advise the beginner to undertake the more elaborate types of prototype craft for a first attempt, particularly if he wishes the boat to spend a good part of its time in its natural element, and not merely in a showcase. Such boats take a long time to build, and may be completely



Mr. J. Vines's "Silver Jubilee"

spoiled by minor errors in either the general design or details—even in the finish. Admittedly, many beginners have built some very fine prototype models, but in such cases they generally start off with a very clear idea of what they want, and a firm determination to achieve it.

Models of large and impressive prototype craft do not, in the majority of cases, make a very good showing as working models. If they are run at scale speed, they are much too slow to navigate well, and at higher speeds, look anything but realistic on the water. The intricate detail work is very liable to damage through rough handling at the pond, and it is difficult to avoid scorching of the upper works in the case of steam craft, or spattering with dirty oil

in the case of i.c. engines. As a result, such boats are liable to lose their immaculate appearance, and thus their realism, very quickly.

The smaller prototypes such as tugs, pinnaces, pilot boats, etc., can generally be modelled much more satisfactorily, and run very well if suitably powered. They have much less top hamper, and the upper works are more robust in relation to their size, while they can be run at something approaching scale speed. But hull construction, no matter what method is employed, calls for a good deal of skill, and any attempt to simplify the lines of these boats may result in spoiling them either in the purely aesthetic sense or in respect of efficient and clean running.

If one contemplates taking up competition work of any kind, a boat having a simple and rugged hull construction, well adapted to stand the wear and tear of a powerful engine, is advisable, and the forms of nondescript or semi-prototype boats variously known as "launches," "runabouts" or "sharpies" are deservedly popular in model power boat clubs. These boats are relatively easy to build, and despite their rather austere make-up, still give plenty of scope for good design; it is by no means necessary for them to be the hog-nosed, slab-sided and flat-bellied monstrosities which, unfortunately, they sometimes are.

Unless the constructor has a very definite ambition to achieve speed at all costs, and is prepared to go to a good deal of trouble in the pursuit of this aim, it is in my opinion best to resist the allurements of the hydroplane. While it is very easy to knock up a speed hull of sorts, especially with the aid of those modern labour-savers, balsa wood and cellulose glue, and to equip it with a ready-made engine, the ultimate satisfaction obtained by the majority of



Mr. Hood with his steam-driven cruiser "Truant"

**Continued from March issue, page 18.*



Mr. R. O. Porter's "Slickery," another of the "straight shooters"

constructors of this form of craft is not comparable with the trouble encountered in getting them to work properly, not to mention finding suitable water to run them, and avoiding public execration on the grounds of noise and general nuisance. As a result of many years' experience with model power boats, most of which was spent in the pursuit of speed, I am convinced that the type of boat which can be run in any old duckpond, without having to rig special apparatus such as a tethering pole, or getting a squad of helpers to man lines, stop watches and so on, is the one that gives the constructor most pleasure, and the longest run for his money, time and labour.

STRAIGHT SHOOTERS

As readers are aware, one of the most popular forms of contest for boats, other than purely racing types, is the steering competition, and many constructors devote a great deal of thought and experimental work to the production of craft which will steer a true course. Many of the efforts made in this direction, however, are misguided, and discussion on this topic reveals that there is no very clear understanding of the factors which influence success in this respect. One can, however, learn a good deal from the observation of boats which in the past have been notable for their success in steering events.

Perhaps the most famous of all these boats was Mr. Vines's *Silver Jubilee*, which in pre-war days had hardly a serious rival in its class. Had there been a gambling cult in the model power boat world (which Heaven forbid!) I doubt whether any bookmaker would have accepted bets on this boat at any price whatever! Unkind critics used to say that this boat was so long (it was well over 6 ft.) that it had its nose

in the target before it started; but many other competitors built boats just as long, without capturing the secret of dead straight running.

Silver Jubilee was designed on the strength of long experience, and the hull form was very unusual—some might say freakish—with a very pronounced keel, in spite of its shallow draught, and the floor ran from an acute vee at the bow of a concave surface at the stern. A very important contributory factor in its success, also, was the powerful and absolutely consistent flash steam plant, one of the finest marine installations I have ever seen. Mr. Vines appears to have practically retired from model power boat running since the war, but it may be that he is content for his masterpiece to rest on its laurels.

All the hulls built by Mr. E. W. Vanner—and they are legion—have held a high reputation for accurate steering. These have generally been smaller boats than that mentioned above, and of various types, including launches, tugs and cruisers; they have not had exaggerated keels or unorthodox lines, but have simply been of sound "shipshape" design, built really accurately and symmetrically. Mr. Vanner has generally specialised in tinplate hulls, and has evolved unique methods of his own of constructing them with little more equipment than a pair of snips, a soldering iron and the domestic flat iron. Most of his boats have been petrol driven, but they behave just as well with steam propulsion. This, however, is by the way; neither constructional methods nor means of propulsion affect steering, so long as they serve their designed purpose.

Another very successful exponent of straight steering is Mr. Hood, of Swindon, whose steam launch *Truant* has won many steering competitions



Mr. E. W. Vanner demonstrating his methods of metal hull construction at the "M.E." Exhibition

over a period of two decades. I could mention quite a number of other constructors whose boats have achieved success in this sphere. It has, I think, been proved that good boats of any type, with sound and reliable engines, can be made to steer straight, but there are obvious advantages in using a long straight keel surface, fine hull lines, and as little top hamper as possible, so as to reduce deflection either by water or air currents. Speed is also desirable, as a hull which takes a long time to cover the course has more chances of being influenced by side currents; but this can be very much overdone, and a fierce, over-driven hull can be extremely erratic.

Excessive propeller torque tends to cause an otherwise correctly adjusted boat to run in a circle instead of a straight line. This tendency is more pronounced with some types of hulls than others, and the same applies to the deflection caused when the hulls heel over, either because of side wind or other influences. Naval types of craft, especially destroyers, are often prone to this fault, largely on account of their narrow beam and rounded bilges. Obviously the particular shape of the body curves of the hull affect steering when one side has a much greater amount of surface immersed than the other. Some kinds of hard chine hulls, such as motor torpedo boats, are largely self-correcting in this respect, but the factors which produce directional stability are very involved. Unless the constructor has some knowledge of the theory of naval architecture, it is best not to attempt to design hulls but to follow

designs which have been proved to work successfully in model size.

It may here be remarked that one must be rather cautious in applying the results obtained in full-size practice to model design. Apart from many effects which cannot be scaled down, the requirements are totally different. Good steering, in a full-sized ship or boat, often means ready manoeuvrability and a prompt response to the helm. The model, on the other hand, being left to its own devices, must be capable of steering itself, with no man at the wheel with eyes glued upon a distant landmark or a compass card, to check the slightest tendency of the craft to deviate from a true course.

This line of thought naturally brings up the idea of "automatic" steering, with the aid of a gyroscope or compass needle, but this fascinating subject must be left for another time.

RUDDERS

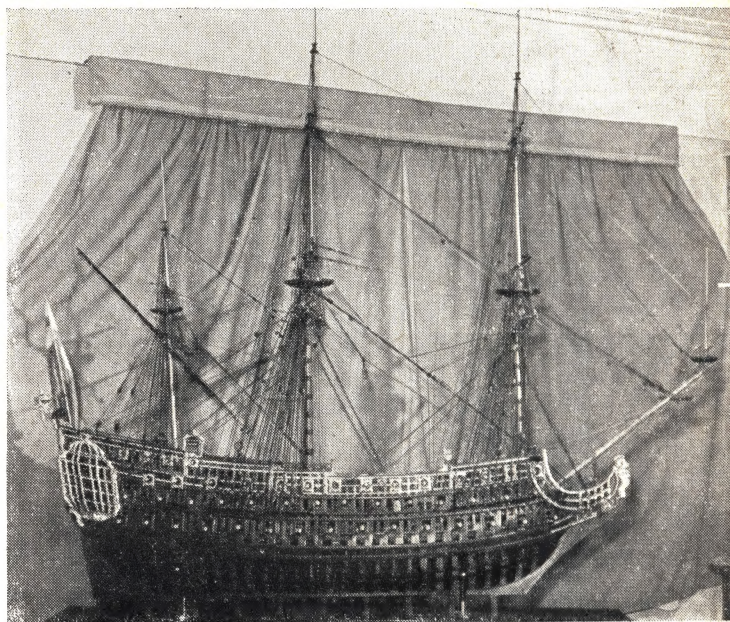
The part that the rudder plays in the ability of a model boat to steer straight is much less than a good many constructors are inclined to think. Boats have often been built with adjustable rudders, having elaborate means of control to micrometer limits, while others have had enormous rudders, almost equivalent to underwater sails, but neither are of any avail to turn a poor steering boat into a good one. On the other hand, many successful boats have had

Continued on page 27

The
LOYAL LONDON
of 1666

BY LESLIE A. WILCOX

*A replica of a model lost when
Trinity House was blitzed in 1941*



A broadside view of the model

THERE have been many *Londons* in the Navy, and in Pepys's diary on March 8th, 1665, he mentions *The London* which Sir J. Lawson's men were bringing from Chatham to the Hope and there he was to go to sea in her; but a little on this side the buoy of the Nore, she suddenly blew up.

On March 10th—"At noon to the 'Change,' where very hot, people's proposal of the City giving the King another ship for *The London*, that is lately blown up."

On June 10th, 1666—"After three days of trial in vain and the hazard of the spoiling of the ship in lying till next Spring, besides the disgrace of it, news is brought that the *Loyall London* is launched at Deptford."

Just one year later this ship was burned by the Dutch in the Thames.

Some five years later Sir Jeremy Smith, who had been captain of this *Loyall London*, asked Mr. Shish who had built her, for a model of her for Trinity House. Jeremy Smith was an Elder Brother of Trinity House and Mr. Shish evidently thought it good business and the corporation came into possession of one of the largest of the Stuart Period Ship-models.

It was one of the Corporation's most treasured possessions and its loss by enemy action in 1941 was much regretted.

At that time I had the good fortune to be working with Robert Spence whose knowledge of Stuart Period Ships is profound. It was upon a suggestion of his that it would be a fine thing to replace the *London* that a start was made in 1943, after a fair

amount of correspondence along various channels, which however produced little help.

Trinity House had nothing. All had gone in flames. From odd sources we began to put together bits and pieces of information, which fortunately included dimensions. I had never seen the original model and therefore had no mental picture on which to draw. Mr. Spence on the other hand remembered well what the model was like.

The draught then became a problem. Mr. R. C. Anderson offered advice which was gladly accepted and a set of lines was produced. As the present model is as near as can be, a replica of the old one, the size was such as to necessitate the use of drawing instruments of considerable magnitude. Before I could start I had to manufacture T- and set-squares and make a drawing board large enough to accommodate a draught of 6 ft. overall length. These tools were unprocurable in 1943. The dividers were wooden and carried sewing needles at their leg-ends.

I spent some two to three weeks on the draught, fairing up very thoroughly and making as workman-like a job of it as possible. Time spent on a draught for a framed model is time well spent. I was able to put all necessary data on this one drawing owing to its large size.

The wood presented a problem. At that time one was allowed to purchase up to £1 worth per month—if one could get it. Strangely enough, we were offered one log of pear at our own risk which we did not consider, and finally, after testing a sample, decided to use English Yew. This was cut for us in various thicknesses of 8 ft. lengths.

Our workshop had during these war years a fair set of machine tools for this work of model-making. I had an excellent band-saw, of small capacity it is true, but quite capable of handling anything required for this model. A sander, jig saw, circular saw and electric drill and large benches simplified the work.

Previous experience had taught me how to use the band-saw with a loose table and so vary the cutting angle and this proved a great time saver when cutting out frames. I varied the angle of cut on the frames as I sawed them and I don't think any went wrong. Incidentally, I still have all my fingers and thumbs.

Realising beforehand that the weight and bulk of the model might become considerable at the finish, I made a fairly hefty building board, consisting of a 7 ft. \times 1 ft. \times 1 in. piece of canary with a 7 ft. \times 8 in. \times 2 in. of cedar on top of it. The reason for these two pieces is that they were to hand when required.

The frames were slowly built up and screwed to the keel. I was able to secure a quantity of $\frac{1}{8}$ in. dowels—in those unhappy days, a pretty considerable piece of chicanery. The frames were dowelled together in casein glue and left cramped up in vices and nine cramps overnight. I have still some bits of rejected frames and they are unbreakable.

Bilge stringers, deck clamps, etc., were cut full length and screwed in. This screwing may offend

the purists but the heads were countersunk mostly and covered over.

When the model had proceeded this far Mr. Spence managed to get hold of some really good pictures of the old model and although we found that we had made some mistakes here and there, in the main things were going fairly well.

We also discovered some peculiarities. The lower ports for instance had a sort of picture frame round them and the ship's frames were diminished to a strange line that was not of the sheer or deck. The channels were too short and the rigging incorrect for the period.

The ports had to be cut in the frames and frame-heads re-fastened and when I had got this far the war ceased and I had to think about getting everything to London. I had accumulated a fair load of goods and brought all including the model back in a van. It was uncased and travelled the 100 miles in perfect condition without any attention.

It went straight to my studio and for some while I lost much time in having to tell the story to visitors who were pretty frequent in those first post-war days. I had chosen to have it at my studio as I thought I should be unable to accommodate it at home but I had forgotten that a clause in my agreement forbade me to make any noise of workshop sort at the studio.

So the model stayed as it was for some considerable time. Meanwhile, both Spence and I had got down to some carving—he to the figurehead—and I to the stern coat-of-arms. We soon realised, however, that the model would get nowhere like that and Spence having finished another model took the *London* to his home and I saw it only at intervals.

But it progressed rapidly. Spence got the decks and the guns in and virtually finished the hull, and as it approached completion we began to see a good looking ship. The wood was stained down and polished and then Spence began the labourious carved work. Much of this is repetitive and required considerable stamina for that is a pretty lengthy task. Also—and this is the chief factor—it requires a first class artist. Mr. Spence has all the qualifications. Readers who have seen his model of the *Naseby* at the National Maritime Museum will know his abilities. The carved work on ships is not quite the same as church work for instance, though some churchwork of the period bears a resemblance. There is a tradition which has to be followed, if the model is to look right.

I had cut the masts out during the time Spence had the model and was amazed to find that from the tenon at the keel to the truck on the main was over 6 ft! When they were in the ship we could see that we had a large proposition to deal with. It became apparent that wherever it was rigged, the problem of moving it was going to be sticky. I had the option of renting a garage or some such place, or doing the job at home and finishing up with a tin opener.

I finally decided that home comfort had the greatest pull—even if the hull finally had to fetch the house down. So the model travelled once again, this time to my house where as soon as it arrived, I had



Mr. Wilcox at work on the rigging. The large scale of the model will be noted

to construct a substantial but low table to put it on. For over 18 months my wife and family have put up with this enormous affair.

The rigging has been carried out with R. C. Anderson's *Rigging of Ships in the Days of the Spritsail Topmast* firmly grasped in my left hand. Also photographs of the *St. George* of 1701 have been of great help and influence.

I had a good pre-war stock of Italian hemp but found I needed more and had a good deal laid up for me. Also I was using my own rope machine for special jobs.

The masts and yards are of pine. I prefer old stuff which I split with an axe and use only the straight pieces which result.

The blocks are made of yew—a somewhat unusual wood for the purpose but there were lots of pieces lying about.

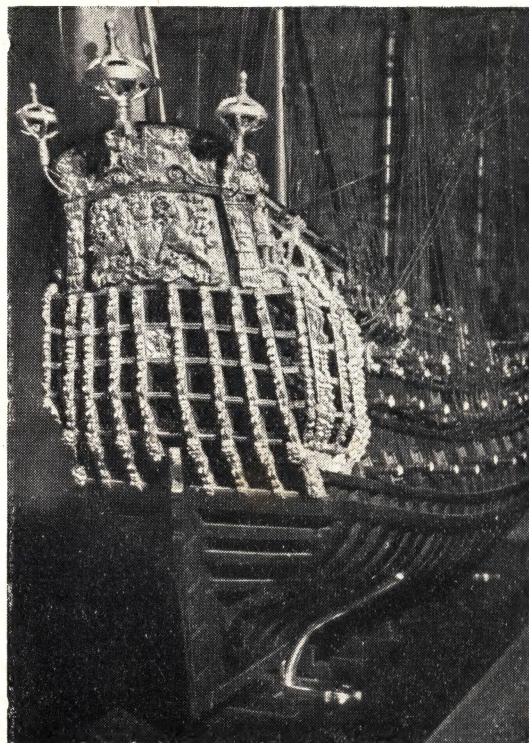
One thing that gave me seriously to think with regard to the rigging was its amazing reaction to the atmosphere. I have read somewhere that 6 ft. had to be taken up in the mainstay of a newly-rigged vessel after a day or two at sea. But I did not bargain on the terrific shrinkage which took place on every damp day. The fore and aft stays would go bar taut and I always felt that at any minute the channels would crack under the pull of the shrouds. In order to allow for this sort of thing the rigging has to be quite slack in dry weather.

The baseboard and supports are a copy of the original.

The great size of the work has provided much of the enjoyment. It will have a lot of influence on my next project which I think will be on something like the same scale. The original *London* model was to no particular scale, all we could say was that it was approximately 3 ft. to 1 in.

When Trinity House is rebuilt, which will most likely be toward the end of 1952 the model will go there. Meanwhile it is to be accommodated in the Science Museum.

There are one or two points which may be of interest. The original model is to my knowledge the earliest that was framed double with room and space. All others have, I think, the Navy board framing. The queer contraption on the quarter deck is a copy of something that appeared in the original. Nobody



The gilded decoration on the stern

seems able to say definitely what it was, beyond "some sort of companion."

The removal of the model from my house is going to be a serious matter. It is on the first floor and has to be got downstairs somehow. The mainyard is 32 in. A domestic doorway 30 in. It is a two-man job to lift it and I may have to remove baluster rails.

Keeping it clean and removing dust have been regular employments. After much thought I arranged an extension to the vacuum cleaner with miniature nozzle and piping. This I thrust between the timbers to clean lower decks. It worked. Regular rubbings with the boot brush have kept the necessary polish.

MODEL POWER BOAT TOPICS (Continued from page 24)

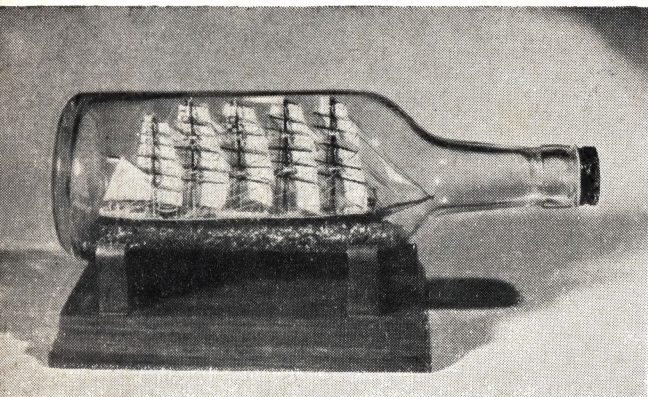
no rudder at all in the accepted sense, but simply a non-pivoted fin of no very abnormal area, which can only be adjusted by bending, and having once been properly set, is left severely alone.

Some boats have rudders located in the wrong place, so that they are affected by the eddies of the stern wash, or by the slip stream of the propellers. There is something to be said for using twin rudders for a single-screw boat, or a single central rudder in conjunction with twin screws, so that little disturbance of water occurs in the region of the rudder. The vertical depth of the rudder may not be sufficient to render it really effective; it should always be deep enough to reach "solid water." Mr. Vanner

once told me that he believes in making the rudder reach at least as low as the propeller tip at its lowest point.

Constructors often make rudders long in relation to depth, under the impression that this produces the greatest steering effect, but experience has shown that in this, as in all other types of hydrofoils, a high aspect ratio is the most effective. The advantages of streamlined or balanced rudders are by no means so pronounced in models as in full sized craft, but they are justified on the grounds of good general design and fidelity to modern practice.

To be continued

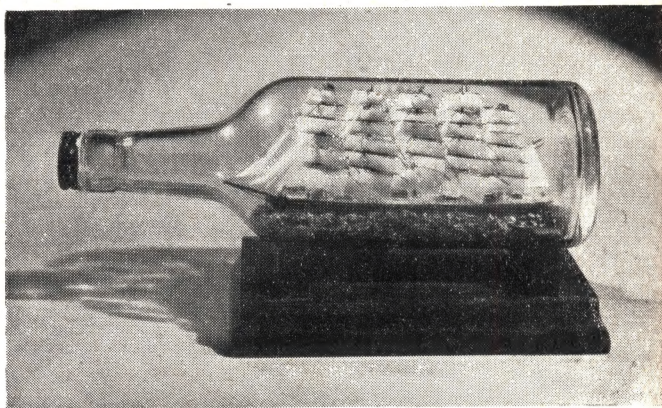


A FIVE-MASTER IN A BOTTLE

by CAPTAIN BROWN

THE model of the five-masted ship in the bottle is that of the German vessel *Preussen*.

The building of this little ship occupied the spare moments of nearly six months, but looks quite smart now that she is finished. She was made in two parts, the lower part or bottom of the ship was put into the bottle first, and the upper part glued on top of this. When the glue was dry, the whole job was then pressed down to the waterline. To pass this ship through the neck with all sails set is quite impossible, therefore the only sails set before she went in were the headsails and staysails. The squaresails for each mast were cut out of one piece of paper and hoisted by means of masthead halliards. Where it was necessary for the sail to pass over a stay, that sail was cut through at the "tack." The leesides or "clews" were not cut through at all, but those little corners more lightly shaded out with a blue pencil. The "lifts" were then stuck on, the sail rolled up and passed through the neck. The whole business was then hoisted up, passed over the stays and the halliard stuck down and cut off. The yard arms were then stuck to their respective sails, the braces hauled tight and cut off. That finished off the aftermast for good. An elegant invention of my own,



this, but a very fiddling job. Makers of these models should make a rough one, nail it to a board and practise this method. The signal flags which do not show up well in the photograph, read, "Valparaiso to Hamburg," with the pilot jack at the fore, and the ship's numbers and ensign at the aftermast.

EDITORIAL NOTE.—We publish this description of Capt. Brown's ship in a bottle, as we consider it a very fine example of this type of model. The proportions of the prototype are perfectly matched with the shape of the bottle, and the bottle is of clear glass and smooth shape which enables one to see the model without distortion.

A FILM PREMIERE

THE world premiere of the new Warner film, "Captain Horatio Hornblower, R.N." with Gregory Peck and Virginia Mayo, is to be made the occasion of an appeal for the King George Fund for Sailors and the Fund for the Restoration of the *Foudroyant*. H.R.H. Princess Margaret will be present and the Society for Nautical Research are supporting the occasion, which will take place at 8 p.m. on April 12th at the Warner Theatre,

Leicester Square, London. Ship lovers and ship modellers will be interested in the scenes of the Navy and its ships in the Nelson period, and this is an opportunity to see the kind of film which interests us and at the same time to feel that the expense is contributing to a cause in which we are also deeply interested. Application for tickets should be made to the Lady Rupert Nevill, 1, Chesham Street, London, S.W.1.

★P.S. GLENSANNOX

A $\frac{1}{4}$ -in. Scale Working Model

By A. S. Miller

AS mentioned in the beginning, it cannot be stressed too much that a successful paddle model must have all the overhanging weights as light as possible if excessive "tenderness" is to be avoided. In a model of the *Glensannox* type, owing to comparatively little top hamper, the tendency is not so pronounced, but it is always present if the hull is approximately to scale beam and depth.

The paddle wheels themselves are constructed entirely of brass with wood floats, though these might be of aluminium as an alternative. The outer rings shown on the drawings are each built up in four segments, jointed together by butt straps, and are of $\frac{3}{8}$ in. \times 16 gauge strip. Alternatively, they may be cut out of 16 gauge sheet in one piece. The inner rings, being smaller, should be cut out in this way. The radial arms, 16 in each wheel, should be shaped from the same 16 gauge metal.

In order to obtain accuracy, eight of these should be riveted together and filed up at the same time. Two $\frac{3}{4}$ in. diameter \times 16 gauge brass discs are required with a $\frac{3}{8}$ in. diameter hole in the centre. The radial arms are riveted to this disc, with the $\frac{3}{32}$ in. holes for the pivot centres all exactly the same distance apart on the pitch circle. Each disc with the arms complete with outer and inner rings attached is then mounted on a short length of thin copper or brass tube. In assembling, a number of lengths of $\frac{3}{32}$ in. wire should be threaded through the opposite pivot hole centres on each ring, to ensure that they are all dead in line. The discs should then be soldered to the tube, which should be a tight fit in the disc. Fig. 8 shows the idea in perspective, and the drawing (Fig. 9) gives all the requisite dimensions. The tube should be drilled to take a $\frac{3}{32}$ in. split pin, which goes through the shaft in the correct

position. A suggested method of making four or six of the brackets, which carry the floats, is shown. See Fig. 10. Eight of each type, viz. with and without extension for operating arm, are required for each wheel. The radial float operating arms can be

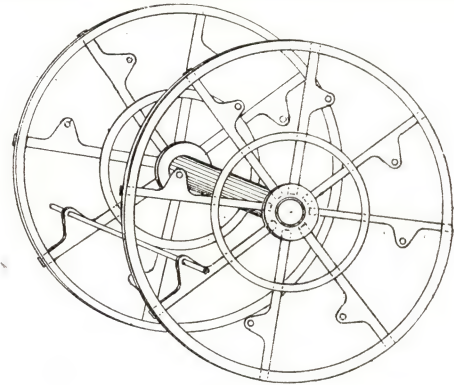


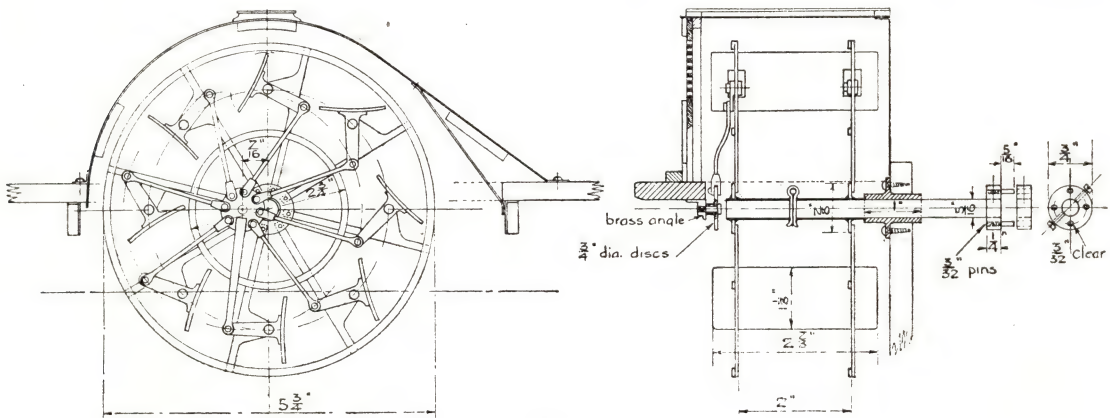
Fig. 8.

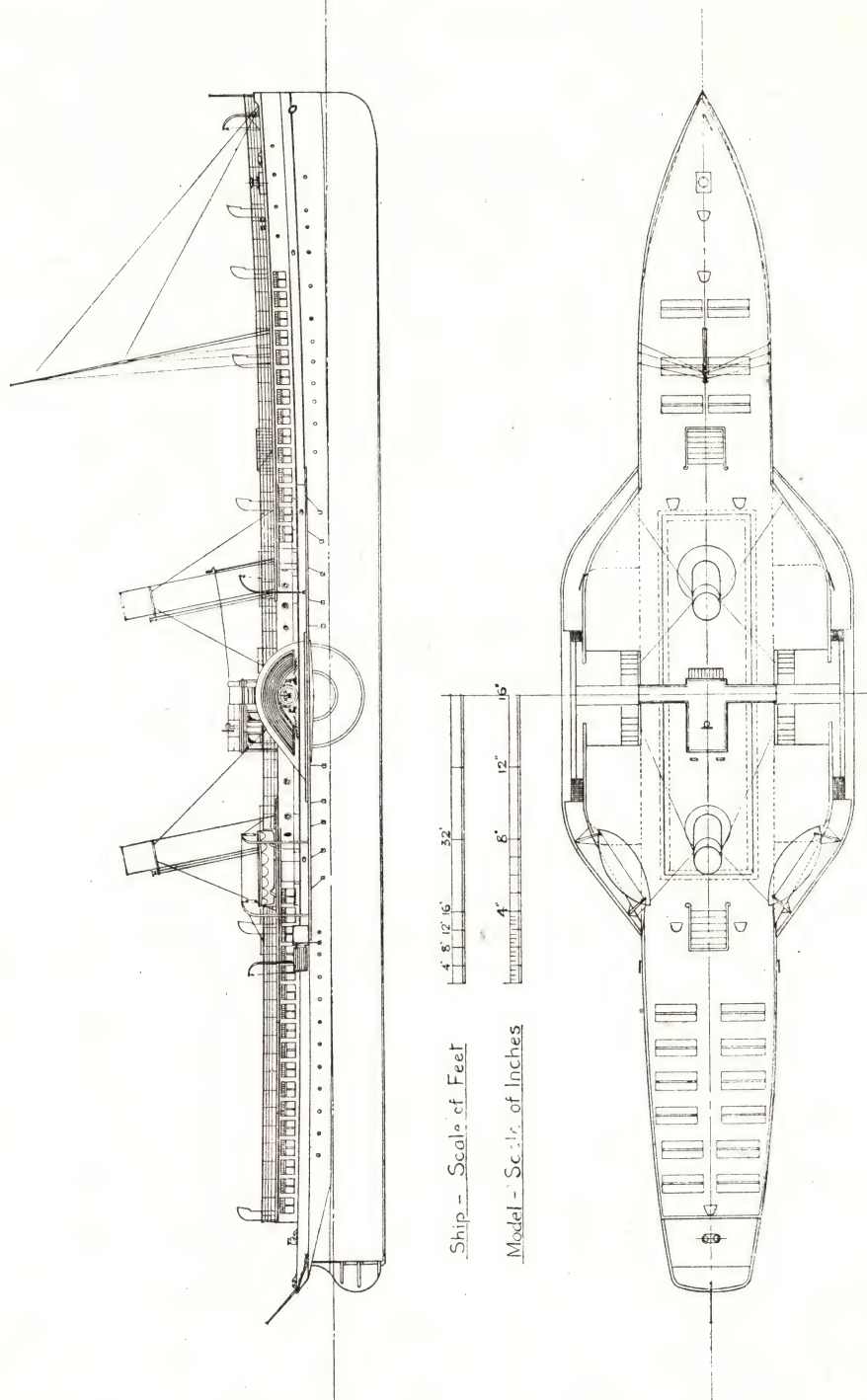
made from 14-gauge brass wire, and, though these are reduced to $\frac{1}{16}$ in. diameter, the stouter gauge is necessary to obtain a satisfactory palm at the float lever end.

It will be appreciated that accuracy is essential, and great care should be taken in making all the parts and in the subsequent assembly of the whole wheel. Time and care spent on this work is of paramount importance for a smooth running wheel with the minimum of friction in feathering.

Do not overlook the point that one of the float operating arms must be fixed by a rivet or solder to the actuating disc on the sponson. The floats, if of wood, can very conveniently be cut from an ordinary boxwood ruler. After completion of each wheel with

★Continued from March issue, page 14.





P.S. "GLENSANNOX"
Plan and elevation of the completed model

the float actuating disc and arms all assembled, to test the feathering and running, a temporary set-up should be prepared. This consists of a board to represent the side of the hull, drilled to take the shaft bearing with a dummy sponson mounted on the side. The angle frame which carries the actuating disc with its arms, can then be clamped to the underside of the sponson and, although the drawing gives the distance of the centre of this disc pin, forward of the main shaft, some slight adjustment might be necessary depending on the accuracy of the assembly.

The lowest float should, of course, be vertical, and a very small alteration in the position of the pin should secure this condition. The main shaft is in three parts, and is of $\frac{5}{16}$ in. stainless steel with two 4-pin couplings mounted as shown. When the model is not in use, these couplings can be disconnected and the feathering action displayed to anyone interested, or, the centre portion can be removed complete with its gearbox. By withdrawing the split pin securing the



Fig. 10.



$\frac{3}{32}$ " Brass shouldered
Pins

wheel, this portion of the shaft can also be removed, but unless something is put in its place, the wheel will drop and possibly suffer damage.

Saloon Sides. (See Figs. 11 and 12.) As already indicated, these are cut out of 22-gauge aluminium or brass sheet. The former is appreciably lighter, but brass has an advantage for soldering. On the after saloon sides, there are ornamental pillars fitted between each window opening, and with brass, these may be soldered, but with aluminium, riveting is called for. The omission of these pillars will not materially affect the general appearance, and whether to fit or not, will depend on the amount of detail put into the ship.

The fore saloon sides are plain, and a word of warning concerning these. The bottom edge is not just a straight line, but is slightly concave for about one-third of its length from the bow, owing to the slight sheer of the side. A template should be made and tried out before cutting the metal strip.

The fore saloon windows, 14 in all, are plain rectangular openings, accurately spaced and filed out. The after saloon has 17 similar openings.

For the window framing, four strips of cedar or good cigar box wood are required, and these are best made up as detailed.

After the metal sides have had all the openings cut out and finished, drill on, say, six of the thin strips between the openings, a pin hole as shown. For all the woodwork, the small pins known as "Lills" are

ideal, but they must be of either plated or plain brass. Steel pins are not suitable, because in time they rust and split the wood. The wood strips should now be secured temporarily to the metal sides by these pins,

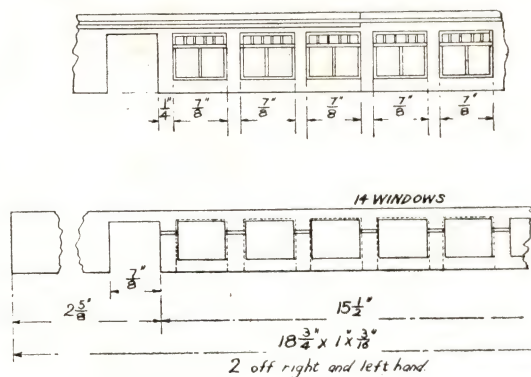


Fig. 11.

and the outline of each opening very carefully marked on the wood in pencil. When cutting out the holes in the wood for the windows with these pin holes already made, the risk of splitting is reduced considerably.

Do not forget to mark each strip so that it goes back in its correct location.

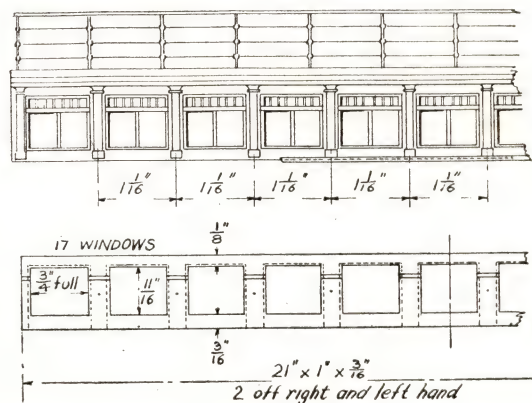


Fig. 12.

The openings in the wood should now be cut out, but $\frac{1}{16}$ in. smaller all round than the pencil marking, and as the space between each is only $\frac{5}{16}$ in., great care is necessary. By drilling a $\frac{3}{32}$ in. or $\frac{1}{8}$ in. hole at each corner and cutting out the rectangle with a fine fret saw, no breakages should occur. For trimming up this woodwork, a very sharp penknife is as good as anything.

Criticism might justly be made that the frames made in this way have the grain on the vertical edge the wrong way, but if one is very meticulous, suitable strips can be let in on the front.

To be continued



Photo. by courtesy of Sir Frederick Maze, K.C.M.G., K.B.E.

The *FOOCHOW* *POLE JUNK*

By

G. R. G. Worcester

*Late River Inspector, Chinese
Maritime Customs*

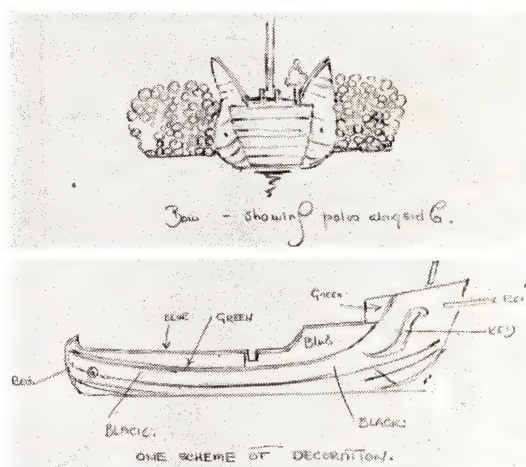
FEW Chinese junks are so well known in name, at least to the ship-lover, as the Foochow Pole Junk. About 20 years ago the junk anchorages at Woosung, the Pei Ho and Canton were closely packed with these cumbrous, albeit beautiful, junks towering in unweildy masses from the water or loaded down with immense masses of poles slung on each side. In 1946 there were only ten of these vessels afloat; today they have probably disappeared completely from the China sea.

This type of junk is very dear to the heart of the Chinese model makers of Hong Kong and Shanghai. These models are designed for the tourist trade and a good number have found their way to England. At first sight they appear good models but a closer examination will show they embody many artistic inaccuracies and in no way are they faithful reproductions, in other words they are not scale models and the English model makers will do well to give them a very wide berth. Fortunately, however, there is an accurate model in the National Maritime Museum at Greenwich.

The Foochow Pole Junks are essentially cargo carriers. They trade up and down the China coast between: the Pei Ho in the north and Canton in the south.

They vary in size; some may be as long as 180 ft. with a beam of 28 ft., but the most common size is about 148 ft. with a beam of 30 ft. A junk of this type is illustrated in the drawing (Fig. 1) which

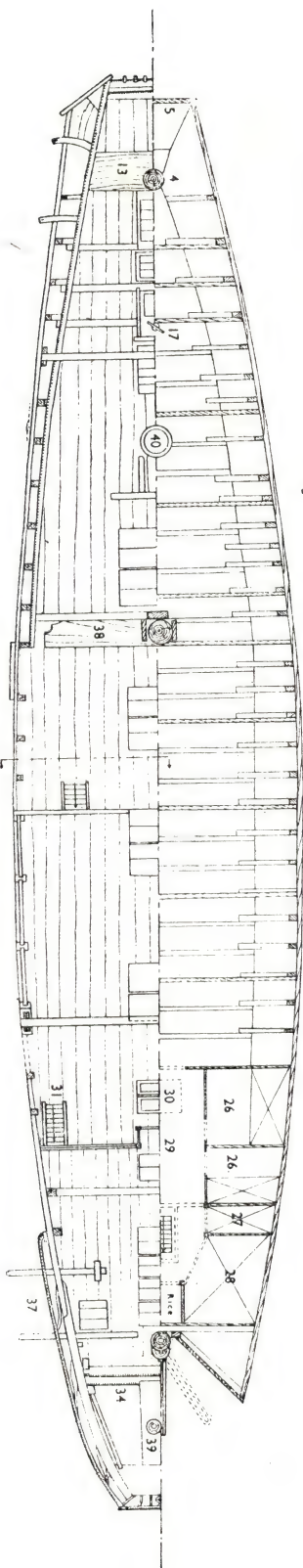
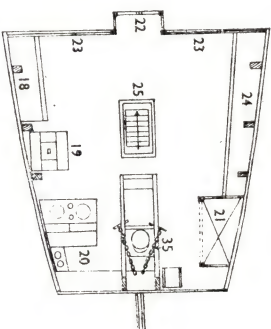
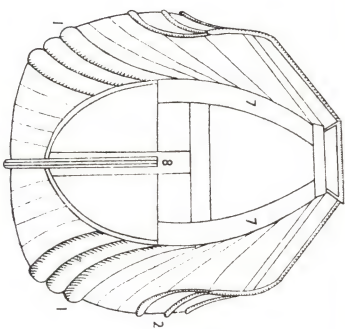
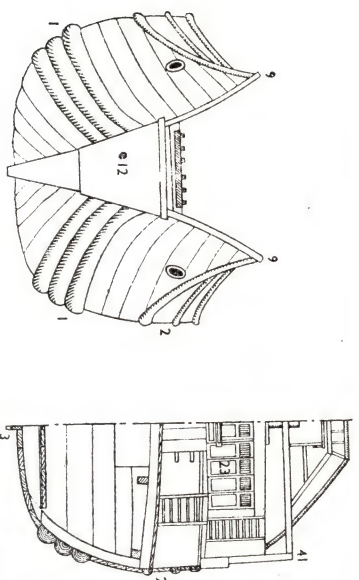
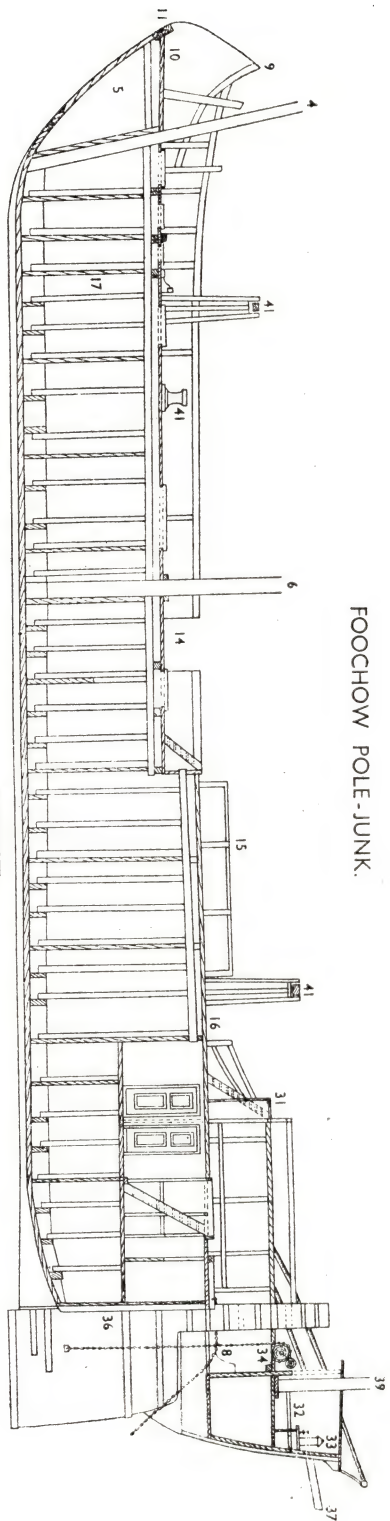
was made by the writer in 1946. The junk is built of soft wood and is of exceptionally strong construction, for there are at unusually close intervals 15 full bulkheads of hardwood, extending, in most cases, from the bottom to the main deck. There are in addition 37 hardwood frames, some of which act as an extra strengthening to the bulkheads. The



The author's sketches

MODEL SHIPS AND POWER BOATS

FOOCHOW POLE-JUNK.



SCALE:
0 5 10 15 20 25 30 FEET

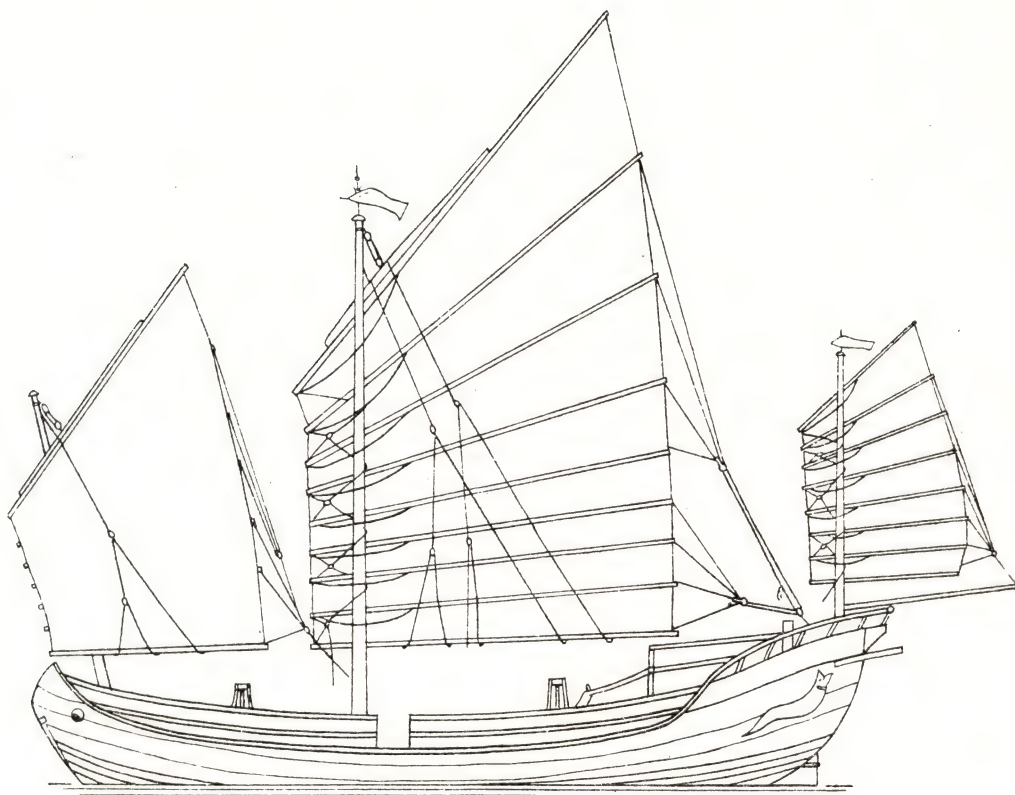


Fig. 2. Side elevation and sail plan

sides of the hull are composed of long and heavy planks laid on edge and secured to the bulkheads and timbers. Longitudinal strength is provided by three enormous wales. These are of irregular shape, scarfed to get the length, and are usually half trees cut down the middle. Lying close together and following the curve of the bilge throughout, they also serve as bilge keels as they are placed so low on the hull that, except at bow and stern, they are at or below the water line, according to whether the junk is light or loaded. Three lighter wales are situated at or above deck level at varying intervals. The bottom and bilges are gently curved transversely. Longitudinally the bottom is also slightly curved throughout its length. This particular junk has a light keel.

The distinctive features of these junks are the tall oval sterns decorated with characteristic brightly-coloured paintings. The scheme of decoration is extremely complicated consisting as it does of characteristic pictures of the Eight Immortals, the Conch shell, insignia of royalty, an umbrella for dignity and high rank, a lotus for purity and perfection, and a fish representing wealth and abundance; a phoenix, the sign for good government, is always present. Dragons are always a conspicuous motif. They were the emblem of power manifesting itself. They live in the ocean in autumn and ascend

to the vapourising clouds in spring. It is important to get these designs correct and the intending model maker would do well to study the stern of the model in the National Maritime Museum at Greenwich.

A square aperture amongst this gay galaxy serves as a hawse pipe for the stern moorings. The decoration and colour scheme of the hull varies slightly. The red sea-serpent on the quarter denotes that the junk hails from the Fukien Province. The oculi are very conspicuous and large, see Fig. 1. Being a merchantman the black eyeball must be in the centre of the white circles. The eyeball is in relief and extends 9 in. beyond the level of the ship's side.

The characteristic bow consists of two wings which, converging sharply at the waterline, rise in a steep diverging curve to deck level, above which they curve abruptly back again. The horns of the wings rise to a point 10 ft. above the main deck. The open space, measuring 9 ft. at deck level, between the wide flare of the bow wings terminates in a heavy transverse steam-beam laid over the deck planking and is iron covered. It is fitted with pin fair leads, removable planks are sometimes fitted to keep out the water. Four anchors are usually carried. These are usually of foreign design.

To be continued



*Miniature Liners

By DONALD McNARRY

PAINTING

THE next job was to paint the hull. I always find this a most tedious and unsatisfactory process and am very seldom pleased with the result although I do feel that I have made some improvement during the last year or so by making my own paints. I must admit though, that I anxiously await the reappearance of the Ship Model Colours by Messrs. Reeves.

I was able to obtain some large tubes of superfine ground colours in oil made by the Pall Mall Paint Co., of Regent Street. These colours are very finely ground, of good opacity, and are considerably cheaper than artist's oil colours.

I mixed these colours in small jars (one's wife can usually supply these ex the dressing table) with eggshell flat varnish, pure American turpentine and a drop or two of Reeves' pale drying oil. I had to experiment a bit to get the right consistency and speed of drying, but as long as one experiments on an odd piece of wood and not on the model the desired results will eventually be obtained.

I found white the most difficult colour to mix as the flat varnish being rather brown made it slightly yellow. Before commencing to paint the hull I always give the wood several coats of French polish with a brush each rubbed down with sandpaper, this fills in the grain and any little cracks there may be around the inlays, and also lays the fluff that will have arisen on the Bristol board through too much sandpapering.

Having rubbed down the last coat of French polish leaving a perfectly smooth clean surface on which to paint, the necessary lines were drawn on the hull dividing the various bands of colours. On the *Stirling Castle* this was not very difficult, it being

necessary at this stage to paint only the main mauve band and the red boot topping, the white band being a strip of paper glued on later to form the steel bulwarks amidships and to hide the lower ends of the superstructure uprights where they go into the notches in the side of the hull.

Fortunately, on the prototype there is a teak moulding which runs the whole length of the ship between the white and the mauve; this can be made on the model by gluing a piece of fine brown thread along the hull before painting is commenced, care being taken not to allow the paint to get on it and also not to let it get fluffy when rubbing down with the pumice powder.

The waterline was next scribed on. A home-made marking gauge will be found very useful for this job, I made mine of two pieces of wood adjustable to each other and a pencil lead stuck in the end of the longest piece.

The boot topping line on the average modern liner rises at the bow and stern to help preserve the graceful appearance of the sheer line, the amount of rise being usually about half way between the horizontal and the sheer line. Getting a clean even line between two bands of colour when there is no moulding to guide one is usually rather difficult.

I have tried most of the dodges, including masking, advised for this job but make a general practice nowadays of using a flat brush and painting up to the pencil line which should be as fine as possible, great care being taken with the first coat. Once this is on it is fairly easy going not to go over the line.

Obviously an even number of coats of the same thickness of paint must be applied for each colour. If the paints previously mentioned are used all colours can be rubbed down together without any fear of the shades intermingling.

I get the best results by using a brush sparingly

*Continued from March issue, page 18.

oaded with paint, and the often repeated advice that two thin coats are better than one thick one, is certainly true in this case.

PORTHOLES

After applying about ten coats of paint to the *Stirling Castle* model I bored all the portholes, and the hawseholes, and marked in the hull doors and then filled each porthole (about 1/48 in. diameter) with gum arabic, which makes quite realistic looking glass.

In making the ports of the *Queen Elizabeth* I found that where two or three ports were close together the wood between had a tendency to chip out and by the time I had bored all 1,200 odd the hull looked like nothing on earth. I nearly gave in then and took up embroidery!

However, I filled in all the chipped places, cleaned out the portholes, filled them with gum arabic and ringed each port with a separate copper wire ring.

The round ports on the *Queen Elizabeth* vary between 10 in. and 15 in. diameter, there are also some oval ones 20 in. x 16 in., and a wooden former had to be made to shape the rings for these. The round port rings were made on twist drill shanks of an appropriate size.

I was rather sorry to have to make rings for the *Queen Elizabeth* as I think liner ports look much better without them, particularly as some close up photographs I have of the *Queen Elizabeth's* hull show the ports to be merely round holes cut in the plating, no ring being visible at all.

The white, black and red of the hull were all painted at the same time, but unfortunately there is no moulding to act as a guide line.

The thin white line between the red and the black was made with some fine white silk which I had previously pulled through a cloth soaked in white paint; this obviates the finicky job of painting it when it is on the hull. The various doors on the hulls of both vessels can either be painted on, as in the *Stirling Castle* or little pieces of paper of the correct size and appropriate colour can be glued on, as on the *Queen Elizabeth*. I think this latter method is the easier and certainly the more realistic.

To go back a moment, when painting the Bristol board sheet for the decking it is a good idea to prepare several sheets of paper and Bristol board in this way. One sheet painted black for the hull doors, and one painted brown for the wooden doors for the deck houses; this latter sheet will also come in useful for making wooden partitions and various other fittings about the decks. Another sheet of paper should be prepared by giving it two coats of white French polish on each side. This can then be cut up and used to overlay the sides of the deck houses; it is advisable in this instance to paint these overlays after they are fitted. The French polish greatly reduces the fluffiness of the paper.

DECKHOUSES

While the process of painting the hull was going on the deckhouses were commenced; no time was then wasted during the drying periods.

I made most of the deckhouses from solid pieces of sycamore (any close grained hardwood will do) and some of the houses, such as the chart-houses, which require to look hollow so that one can see right through the windows, were made entirely of Bristol board.

The solid deckhouses were cut from a piece of sycamore of the correct thickness. It is extremely important that they should be of exactly the right thickness as when two or three decks are built up one on the other any inaccuracy will be doubled or trebled and will completely alter the look of the model. My *Stirling Castle* is 1/25 in. out in this respect; unfortunately, I didn't notice it until too late.

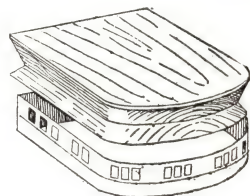


Fig. 8.

When I had cut out all the deck-houses I cut a V shaped groove all the way round the edges and painted it a dark neutral shade, as this helps to give an appearance of hollowness when seen through the windows of the overlay. (See Fig. 8).

The deck-houses which are situated on the upper deck had their tops covered with a piece of the previously prepared decking Bristol board before the paper overlays were glued on. These overlays were marked out on some of the French-polished paper, the windows being cut out and glazed from behind with pieces of cellophane. The doors that were going to be shown open or ajar were also cut out, the overlay then being glued to the edges of the sycamore deck-houses and painted, care being taken not to let the paint run on to the cellophane of the windows.

When the paint was dry the storm handrails were attached where necessary. These were made of brown Pearsalls fly-tying silk and were fixed on with a little white lac varnish.

A strip of paper 3/50 in. wide was cut from the sheet already painted brown and then cut up into lengths of 6/50 in. and used for doors, those closed being stuck on flat and those open on one edge only.

On my *Queen Elizabeth* model, although the doors were only 3/50 in. x 6/50 in., I managed to paint in the panels with a different shade of brown. Some of the doors had little windows in them and these were cut out and glazed before fixing.

Nearly all the deck-houses on the *Stirling Castle* were made as described above with the exception of the verandah cafe forward of the swimming pool. This was open on the after side and was made hollow and, although less than 1/2 in. sq., was furnished with gaily coloured tables and chairs before the roof was put on, but I am afraid no one sees them unless they are pointed out.

The after end of the big deck-house on the promenade deck was also left open, as on the prototype, and is also equipped with tables and chairs and

two sideboards. These can be quite clearly seen and the effect is well worth the extra trouble involved. As may be imagined, tables and chairs at 50 ft. to 1 in. are not very easily made or handled.

Another feature of the deck-house on the promenade deck is the large lounge and bay windows ; after these were glazed, curtains were painted on the inside of the cellophane.

Having made all the deck-houses on the *Stirling Castle* I then made the various ventilators, capstans, bollards, lockers, etc., that were scattered about the lower decks and put them in when assembling as it would be impossible to put them in afterwards. The actual making of these items will be described later.

All the deck-houses were either screwed or doweled down to the deck below them, taking care that any screw heads would later be covered up by some other item of deck equipment.

The Bristol board decks already prepared were, of course, assembled at the same time between the two layers of deck-houses, particular care being taken to see that the notches for the uprights were all truly vertical. The uprights were next glued in, two thicknesses of copper fuse wire being used, the thicker for the uprights immediately below the davits. When these were all in, the strip of white paper previously mentioned was run round the hull above the teak moulding, covering up the ends of the uprights. (See Fig. 1.) Very narrow bands of paper were glued round the edges of all the Bristol board decks, and bulwarks were glued on to the forward ends.

The construction of the window screen immediately below the bridge will be described later when we deal with the side screens on the *Queen Elizabeth*.

The bridge and chart house and cabs on the bridge wings were all made up of Bristol board and one can see right through the little cellophane windows from side to side. Where it was impossible to screw down the deck-houses on the upper deck owing to the screwheads showing, small dowels were let into the deck and corresponding holes bored in the underside of the deck-houses ; with the aid of a little glue this made a very firm job.

The deck-houses on the *Queen Elizabeth* were made on much the same principle as described above for the *Stirling Castle*. Those at the after end of the lower decks were tackled first as these had to be decked over in order to complete the main body of the hull. Some difficulty was experienced particularly at this spot in making the various deck levels and terracing flow smoothly into each other so as to show no joins where the various pieces of paper overlay met. The several cracks that did show I managed to fill in with a mixture of white enamel paint and "Alabastin."

Having finished off the after end of the decks I then set to work on the rounded forward end below the bridge. The whole bridge section was built up separately from the other decks. Both the lower pieces should fit snugly inside the two upright forward inlays, and the bridge itself with its winged ends should rest just nicely on top of these.

The two lower pieces were cut from a piece of

sycamore, the usual V being cut in the edges to coincide with the windows. The forward rounded surfaces were covered in this instance with Bristol board, the windows having been previously cut out and glazed.

The overlays on both these pieces were about 3/50 in. higher than the solid decks to form the steel bulwarks. The lower piece was finished off as on the prototype with two teak rails one above the other. Both rails on the model were made from Pearsalls brown fly-tying silk, the lower being attached direct to the top edge of the bulwark with white lac varnish, and the upper one fixed to the top of the bulwark stays which on the model were represented by small pieces of fine wire painted white. Nearly all the steel bulwarks have a double teak rail and it was a bit of a job fixing in all these bulwark stays, but the finished appearance of these double rails on the model was more than sufficient compensation for the difficulty encountered.

I next made the actual bridge structure, the lower part of which is of solid sycamore. The decking of this piece was extended each side to form the wings of the bridge. The hollow wheel-house was fitted on top of this and Bristol board bulwarks were fitted all round. A feature of the bridge bulwark is the wind deflector which was made from a strip of paper glued to the forward side projecting about 1/50 in. above the top of the bulwark ; the teak rail on the latter was fixed on after the deflector was fitted and improved the appearance from an aft view point immensely.

On the roof of the wheel-house teak partitioning was fitted made from the brown painted paper, enclosing that section of the roof on which are mounted the binnacle, radar equipment, etc. The two lower pieces just described and the bridge itself were all screwed down. The after ends of all three pieces were flush and were left uncovered as the decks butt up against them.

The next job was to make the long line of deck-houses that run along the centre of the promenade deck, some of solid sycamore and some of Bristol board screens with windows cut out. It is not necessary to finish these deck-houses as they cannot be seen through the promenade deck screen windows ; actually I did finish them all with windows and doors as I thought they might show up through the windows but they didn't. However, it was well worth while making the various hollow parts to represent the first class lounge, saloon and smoking room as with a light on the other side of the model one can look right through the ship and the inside windows of these rooms are clearly visible.

Having completed these deck-houses I next roofed them in by putting on the boat deck. This was made from the previously painted Bristol board, in this instance stiffened with some oak veneer, glued on the underside. Care was taken when fitting this deck to see that it was exactly the same width as the deck immediately below all the way along, as the window screen about to be described is glued to both and has to be absolutely vertical.

To be continued

TRADE TOPICS

Our power boat readers will be interested to know that Shell-Mex and B.P. Ltd., have recently put on the market special fuels for i.c. engines in convenient half-pint containers.

Although these fuels have been developed especially for use with model aircraft engines they should appeal equally to speed boat fans. Shell Powa-Mix (etherless) is intended for model diesel engines. Shell Red Glow Fuel has been prepared for hot coil ignition engines and for spark ignition engines which have too high a compression ratio for gasoline mixtures. Both are marketed in half-pint pressure feed containers specially designed to make quick fuelling easy. This is especially useful in competitions.

We have received from the Casein (Industries) Ltd., of Culvert Works, Sheepcote Lane, Battersea, London, S.W.11, a sample of their Laipo XXX Cold Water Glue, together with a descriptive booklet. This is a casein glue and is similar to the Test Water Proof Glue which was popular with model yachtsmen and ship modellers generally for many years before the war. We ourselves have used it for a long time, and a planked hull, which we built some 17 years ago, not to mention others built since then, is as sound as ever it was. Possibly the latest product is even better than the old test glue as a great deal has been learned about adhesives in general during recent years, and especially during the last war. Preliminary tests with the latest sample seem to point in this direction. Casein glue, and the method of using it, was described in our recent articles, "Glues and Adhesives," particularly in the January instalment. In any case the booklet which accompanied it describes in detail its properties, uses and the method of application. It is available in 1 lb. tins which is a convenient and economical size for the model maker. Many leading yachtsmen used casein glue in building both plank and bread-and-butter hulls, its water-proof and heat-resisting qualities being well known and appreciated. We can thoroughly recommend it.

Ship models are now being made in plastics by H.D.M. Models, Melbourne, Victoria, on a new method which they are developing. It is stated that extremely life-like effects are possible in a dull or glossy finish with very durable material, and that the weight is less than that of the ordinary wooden model.

A recent example is a water line model of the Port Line's refrigerated motor cargo ship *Port Brisbane*. This is 6 ft. long and weighs 22 lb., whilst the cost is stated to be about one-tenth of the normal price of ships' models. It is made to the scale of $\frac{1}{8}$ in. to the foot and was constructed from plans and photographs published in the *Motor Ship*, the time of construction being 366 hours. The model was exposed for some time at 90 deg. F. in the sun, and exposed for seven days to rain, and left in a temperature below freezing point. These severe conditions had no apparent effect on the model. We are indebted for these particulars to our contemporary, the *Motor Ship*.

The series of drawings published by Mr. John E. Skinley, of Southend, for model railway engines and material are very well known, but it is not always realised that he also publishes drawings for ship modellers. These comprise a series of drawings for waterline models of various types of craft to the scale of 4 mm. = 1 in., intended for use with railway installations, and a number of drawings of ships, both historical and modern, for full hull models. One of the specimen sets sent us was of the four-mast sailing ship *Falls of Eam*. With its four sets of double t'gans'ls and skysails on main and mizzen this makes a handsome model and the five sheets give complete particulars. The drawings include H.M.S. *Victory*, P.S. *Talisman*, M.Y. *Philante*, tugs, a few liners, and in short a very varied and interesting selection. The Skinley catalogue price 6d. is obtainable from John E. Skinley, 132, High Street, Southend-on-Sea, Essex.

FOR THE BOOKSHELF

"AHOY"

The Journal of the Sheffield Ship Model Society.

We recently received numbers three and four of this excellent journal. The quality of the first two numbers has been well maintained and the editor and his fellow club members who are so ably supporting him, are to be congratulated. Many of the contributors seem to hide their identity under a non-de-plume which we think is a pity. Is it a due to modesty or to possible embarrassment, seeing that they are in such close contact with their readers? An exception is one of the younger members of the club, Mr. C. L. Robinson, who gives an interesting

account of last year's "M.E." Exhibition, and also contributes an article on "Sailing Square Riggers." His beautiful sailing model of the clipper *Caliph*, which he sent to the exhibition, will be remembered. The story of "Fifteen Years at Sea," and the serial "On Whaling and On Navigation," provide a nice variety of interests. Mr. S. D. Drury's notes on "Research for Warship Modellers" with their numerous illustrations are most interesting. We are not sure if the magazine is available to interested people outside the society, but enquiries should be made to the Editor, Mr. A. J. Beal, 89, Norton Lane, Sheffield. The magazine is well worth having.

News from the Clubs

THE THAMES SHIPLOVERS AND SHIPMODELS SOCIETY

The April modelmakers' meeting will be held on April 12th at 6.45 p.m. The general meeting is fixed for April 26th, when Mr. Frank H. Taylor will speak on the "London River" with particular reference to the upper pool. The lecture will be held on the *Discovery*. The regatta for square rigged and prototype sailing models has been fixed for Sunday, July 29th, and will take place on the Lagoon at Hove. This should be a very interesting event. Entries will be welcomed. On February 22nd, Capt. Taprell Dorling, D.S.O., F.R.Hist.S., R.N., better known by his pen name "Taffrail," gave an interesting lecture to a large audience on "Life in the Old Navy." The contrast between the Navy of the present day and that of 50 years ago was very striking.

MODEL YACHTING ASSOCIATION

We have just received from the secretary the club list and regatta fixtures for 1951. The British (M.Y.A.) Open Championships for 1951 are as follows :

Class	Date	Water	Last day of entry	Boats per club	Entry fee
M.	May 12th-14th	The Lake, Dovercourt	April 14th	3	7/6
10r	July 30th-Aug. 3rd	Whitton Lake, Birmingham	July 2nd	3	10/6
12m	Aug. 12th	Paisley	Aug. 12th	3	5/-
A	Aug. 19th-26th	Fleetwood	July 22nd	3	£1
36 in.	August 4th-6th	Birkenhead	July 7th	3	7/6
6m	Sept. 22nd, 23rd	Fleetwood	Aug. 25th	3	7/6

Further particulars may be obtained from the hon. general and racing secretary, C. R. SEABROOKE Esq., 29, Tresham Avenue, Hackney, London, E.9.

BIRMINGHAM MODEL YACHT CLUB

This club held its annual dinner at the White House Hotel on Monday, February 12th. A large company attended, including representation from other Midlands clubs. Mr. E. W. Hague was in the chair and the time-honoured toasts were taken.

It was regretted that owing to ill-health both the President and the Vice-President were unable to attend.

Tribute was paid to the late Mr. W. H. Davey of the Bournville M.Y. & P.B.C. who recently passed away ; it was felt that the sport in question would suffer a severe loss. Respect was also shown for Mr. Miller a veteran of the Birmingham club who also passed away at the commencement of the month.

Entertainment was provided for the latter part of the evening, and as is the wont of model yachtsmen ardent discussion was prevalent on the merits of various steering gears for their respective craft.

SOUTHEND MODEL POWER BOAT CLUB

At the monthly meeting at headquarters on a recent evening, it was decided to hold a "Festival of Britain" regatta at Southchurch Park on Whit Monday. There will be a grand parade of about 40 model craft, and they will represent practically every type of ship. These will be "dressed" and at dusk will display navigation and cabin lights.

There are some outstanding ships in course of construction which will be ready for the regatta. They include Mr. G. Jones's, 6 ft. battleship *Vanguard*, Mr. R. Outings's, 6 ft. cross-Channel steamer *Dunkirk*, Mr. J. Starkey's 6 ft. paddle steamer *Medway Queen*, Mr. J. Scott's *Coaster*,

Mr. J. Milward's 25 c.c. cabin cruiser *Ajax*, Mr. C. Wayne's 8 ft. battle cruiser *Southampton*, Mr. G. Clements's radio boat, and others.

Mr. H. Dowling presented a silver cup for "Festival of Britain" competition. Press officer : F. G. MEARS, 5, Linden Court, Leigh-on-Sea.

NORTH WEST LONDON S.M. SOCIETY

The April meeting will take place on the 9th, when Lt. Commander J. H. Craine ("Jason") will speak on "Research," incorporating a talk on anchors. On May 7th, Mr. G. H. Draper will speak on "Paints and Painting." The meetings are held at the Bonhomie Tennis Club, 28, Harrowdene Road, North Wembley. Hon. Sec. W. O. B. MAJER, 81, Paxford Road, North Wembley.

SHIPMODELLING IN NEW ZEALAND

A letter from Mr. S. I. C. Fenn, of Wellington, New Zealand, informs us that a Hobbies Exhibition was held recently in Wellington, being organised by the Junior Chamber of Commerce. Mr. Fenn enclosed two photographs of the ship models section of the exhibition, one of which we reproduce on this page. There are no ship model societies in Wellington from which to collect models, and all the ship models exhibited were the work



A few of the ships at the Wellington Exhibition

of lone hands. The fact that such a number were got together suggests that there are plenty of shipmodellers in Wellington. If some one were to take it in hand we feel sure a powerful society could be formed and that such a society would be greatly to the benefit of the shipmodelling fraternity in the district.

The quality and variety of the models is excellent and indicates that there is a considerable amount of knowledge and craftsmanship amongst the builders. Mr. Fred Dagger looked after the models in the Ship and Engineering Section throughout the exhibition. Unfortunately, his three models of power-driven Canadian fishing craft were not visible in the photographs. The large destroyer in the lower foreground is powered by a steam turbine. Other power-driven models not shown in the photograph were a very fine steam tug and a model of R.M.S. *Britannia*, which was powered by an electric motor. We are sure that shipmodellers throughout the home country will join us in sending our very best wishes to our fellow shipmodellers in New Zealand and our congratulations on their fine work.

Editor's Correspondence

DEAR SIR,

In reply to your letter enquiring about the pins, the address is Watkins and Doncaster, Naturalists, 36, Strand, London, W.C.2. I would advise anyone requiring these pins to send for samples as I cannot tell the length of all the sizes. I only used three sizes myself. There are fourteen different sizes altogether, ranging from one to twenty, number twenty being the smallest and most expensive.

Yours faithfully,

Barry Dock, Glam.

I. W. MARSH.

After publishing our article on Mr. Marsh's model of Thermopylae we received a number of enquiries as to the size of pins used for fixing the copper plates on the hull. The above is his reply. We might mention that No. 1 size pins are $1\frac{1}{8}$ in. long by 0.022 in. diameter, while No. 20 size pins are $\frac{3}{8}$ in. long by 0.010 in. diameter. These are similar to domestic pins, but are much thinner and will be found very useful to shipmodellers, more especially to makers of miniatures.—(Ed.)

DEAR SIR,

As a beginner of model power boat building I

would be grateful for your advice and that of your readers about the design of propellers.

I have read such advice as "the best diameter and pitch of propellers can be found by experiment"; but surely there must be some basis for calculation in the first place. If there is, as there must be, some such basis, how is it arrived at and how is it related to the number of propellers used, the power of the engine and the weight of the boat?

The particulars of my own boat are as follows:—Length 36 in., beam 8 in., hard chine progressive V bottom; two propellers, maximum diameter possible by reason of hull design being $1\frac{1}{2}$ in. The engine will be a diesel of probably 2 c.c. or thereabouts and it is essential that the impulse transmitted through the propellers should be sufficient to make the hull plane.

Any advice you or your readers can give would be most gratefully received.

Yours faithfully,

Coombe Bissett, Nr. Salisbury.

Wilts.

A. L. ATTER.

We have our own ideas on this very vexed question, but would be grateful to have the views of our readers—(Ed.).

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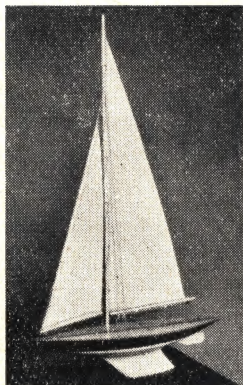
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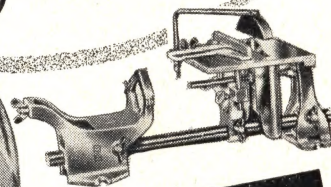
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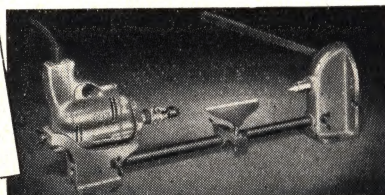
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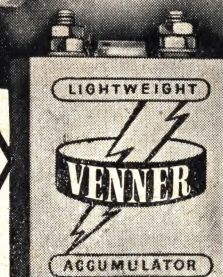
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